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The Benefits of Physical Activity Provided by Park and Recreation Services: The Scientific Evidence

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The Benefits of Physical Activity Provided by Park and Recreation Services: The Scientific Evidence

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Executive Summary

Why Do Park and Recreation Services Provide So Much Physical Activity for So Little Money?

In an era in which health costs have become the biggest single expenditure in U.S. society, the central importance of physical activity in preventing and improving a wide variety of health problems is now well understood. As this has happened, public park and recreation services' central role in promoting and providing physical activity has been increasingly documented by scientific research. Public park and recreation services are becoming part of the healthcare system of the United States and are now recognized as such. This paper explains the scientific basis for this change.

To an amazing extent, the role of parks and recreation in providing physical activity health benefits was ignored by the health community until recently, but that has changed. The state of knowledge is now such that park and recreation services must be planned and funded based on the known physical activity health benefits they provide. Close-to-home park and recreation resources result in more physical activity and better health for citizens. The evidence is also clear that the public supports additional spending for park and recreation services and that such additional spending results in higher levels of physical activity health benefits.

Park and recreation services provide opportunities for physical activity during leisure, and recent research shows that leisure, not paid work or housework, is now the part of life where the most physical activity occurs. People move their bodies either because they have to or because they want to. The necessity of moving one's body in daily life has declined dramatically, helping produce an epidemic of obesity.

While many people experiment with forms of physical activity that are good for them but not pleasurable, they tend to stay with activities that they enjoy, often for decades. Such activities include walking, hiking, jogging, running, bicycling, individual and team sports, unstructured and playground play, dancing, water-based recreational activity, bird and other animal watching, wildlife photography, and hunting and fishing. All these activities are commonly provided by park and recreation services at little or no direct cost to users. While paid fitness clubs and prescription exercise are valuable, individuals are generally actively involved for only a short time, often only three to six months.

Government park and recreation services provide close-to-home, no or low-cost, readily available areas, facilities, programs, and instruction, which provide pleasurable physical activity opportunities. These services are used by the vast majority of the public and would be used to an even greater extent if additional investments were made in them. There is evidence that small additional investments would provide substantially more health benefits. A tiny bit of extra spending, even \$10 a year per capita, has been

shown to provide significantly increased amounts of physical activity. When such an amount is compared to the average cost of a personal trainer for one hour, \$60 to \$70 (Arria, 2010), or the more than \$8,000 per year spent on healthcare per person in the United States, the health contribution of parks and recreation is a rather amazing bargain.

A variety of organizations interested in health, as diverse as the Centers for Disease Control and Prevention, public health departments, the Robert Wood Johnson Foundation, the RAND Corporation, and The Trust for Public Land now recognize parks and recreation as a health service and part of the healthcare system. This has led to the widespread use of health-related partnerships between parks and recreation and a variety of organizations concerned with various aspects of health.

In an era of economic downturn, surveys show that people are more dependent on public park and recreation services for physical activity. A study in 2009 suggests the economic downturn has spurred a sharp increase in public park and playground use among families with kids, especially those with children younger than 6. Among minority groups, park and recreation services have been identified as the most important outlet for physical activity, in spite of inequities of supply and access.

In the fight to make communities more physically active, then, park and recreation services have a critical role to play. There are currently more than 9,000 local park and recreation departments and organizations that:

- manage more than 108,000 public park facilities and 65,000 indoor facilities
- have access to populations most at risk of being physically inactive
- have a wide range of programs led by skilled program leaders
- have a willingness to partner

The following evidence provides an answer to the question “Who ya gonna call?” to increase physical activity and reduce healthcare costs for the American public.

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Physical Activity Benefits Provided by Park and Recreation Services

The vast majority of the public uses park and recreation services, and research suggests an even higher proportion would use them if they were more adequately funded. A growing body of research demonstrates that the cumulative amount of physical activity (exercise) obtained from park and recreation agencies is huge and provides a wide variety of health benefits. At the municipal level, an early national survey found that about four out of five Americans used local government park and recreation services. A recent five-city study of middle-age and older users of local parks found that 85% had visited a local park in the last 12 months. Almost four out of 10 used these services once a week or more, indicating that park and recreation use was part of their lifestyle.

At the federal level, the following percentages of the public participated in outdoor recreation at the following settings for at least once per year: Bureau of Land Management, 9%; Army Corps of Engineers, 14%; U.S. Fish and Wildlife Service, 22%; USDA Forest Service, 28%; and National Park Service, 32%. In terms of state parks, the National Association of State Park Directors reports that state parks received 735 million visitors in 2001, and 67.5 million of these visitors stayed overnight.

People Are Very Often Physically Active When Using Park and Recreation Services

People commonly use park and recreation services in ways that involve physical activity and contribute to their mental and physical health. Several park surveys show that users are physically active during their park visits. Such findings hold true for people of different ages. A study of adult park users in Cleveland, Ohio, for example, found that more than 69% reported moderate or high levels of physical activity. An average visit lasted about two hours, and users spent about half their time walking.

In many of these studies, ethnic minorities constituted an important user group for physical activity. One study, for example, concluded that public parks are critical resources for physical activity in minority communities. However, availability and access to physical activity resources often differ by neighborhood according to the socioeconomic status (SES) of residents. Individuals from lower SES neighborhoods may have limited ability to control their physical activity in the face of inaccessible environments.

The Public Identifies Physical Activity Benefits From Park and Recreation Participation

Research shows the public does not have to be convinced of the physical activity and health benefits provided by park and recreation services, and their belief seems correct. In addition to park use, recreation programs, recreation center usage, and other nonpark opportunities provided by park and recreation departments also involve considerable physical activity. Recreation programs and recreation centers add to the physical activity benefits of parks. A large study of middle and high school students, for instance, concluded that more people used specific recreation areas when they were provided with organized activities, suggesting that increasing the availability of structured, supervised activities will also likely increase park use.

Investing in Park and Recreation Services Increases Physical Activity Benefits

There is a strong relationship between how much money is spent to provide such services and the amount of physical activity health benefits people receive. You get what you pay for. This is true since, on average, more spending means more recreation areas and facilities (as well as proper maintenance for those places), more recreation programs that involve physical activity, more close-to-home opportunities, more provisions for people with disabilities, and higher quality.

The relationship between investment in parks and recreation and the amount of exercise by boys and girls was very clearly identified in a nationwide study using data on high school students from the Youth Risk Behavior Surveillance System. It showed that an extra \$10 spent per capita on parks and recreation was associated with one-third of a day more per week of vigorous exercise by girls. State spending on parks and recreation was also associated with more days of strength-building exercise for both sexes.

This study, like several others, directly implies that a small increase per person in spending for parks and recreation may have significant positive effects on amount of physical activity and in health costs savings and human happiness. While the public is still not highly aware of the direct savings in health costs resulting from park and recreation services, about one-third of the public thinks too little is spent on parks and recreation, while only about 6% think too much is being spent.

Since amount of physical activity has been shown to be an important variable in determining the health of individuals, and since the amount of physical activity Americans participate in is considerably less than recommended for good health, spending for parks and recreation may be an extremely cost-effective way to improve health and lower health expenditures by providing diverse opportunities for physical exercise. To put the \$10 figure cited above in perspective, healthcare costs per person in the United States topped \$8,000 in 2009, with almost none of the money going to prevention. The U.S. Department of Health and Human Services projects that those costs will reach \$13,000 in 2018.

In spite of the cost savings on health from increasing physical exercise through parks and recreation, the amount of parkland per resident in the United States has actually declined due to rapid increases in population. Compounding this problem is that the projected shortfall in funding for public parks and recreation is estimated to be a massive \$48.17 billion over the next five years. Park and recreation spending may be an easy target for budget hawks, but in reality state spending on parks represents an extremely small part of overall expenditures—0.231% on average across the nation. California's percentage was the highest in the country but was still less than 1% of the state's overall state budget (0.979%). Park and recreation investment needs to be greater at the national, state, and local level.

The Supply of Park and Recreation Resources Is Directly Related to Amount of Physical Activity by People of All Ages

The number of parks and playgrounds in a community and the physical area devoted to them are positively related to physical activity levels. Counties with more facilities and more acreage devoted to recreation have a lower proportion of the population reporting insufficient physical activity. Studies of the impact of parks and recreation on the physical activity of young children show that a 1% increase in park and recreation areas is associated with a 1.2% to 1.4% increase in physical activity. Nonwhite children, however, often do not have access to parks and schoolyards in their communities, and they have less access to cars or a decent transit system to reach neighborhoods where the parks are.

Having Park and Recreation Services Close to Home Increases Use and Physical Activity Benefits

How close a person lives to a park or recreation opportunity (proximity) has a dramatic impact on whether or not he participates and how frequently he participates. Closer is better and more is better. Whether it is a park, recreation center, recreation program, playground, or other recreation amenity, distance from one's home is an important factor in whether or not a person will use it and how often. Various studies show that people who live more than one mile away are less likely to participate than those living one mile away or less. Those a half-mile away are more likely to participate than those further away; and those who are within walking distance are more likely to participate than those who are not.

In summary, the scientific evidence points to the importance of park and recreation services in contributing to leisure-time physical activity behaviors and benefits across a number of contexts. However, the capacity and potential of park and recreation services in creating a more physically active America is not fully realized. A number of strategies should be considered and supported in order to maximize the physical activity benefits of these services. What follows is an overview of potential action steps and examples, which incorporate a variety of environmental, promotional, programmatic, people, partnership, policy, and evaluation strategies.

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Increasing Physical Activity Benefits Through Park and Recreation Services

The level of physical activity health benefits provided by park and recreation services is currently both substantial and a huge bargain financially. These benefits, however, could be even greater for the majority of the population at comparatively low cost. Current evidence suggests a number of strategies for increasing their impact.

Get Park and Recreation Services Even Closer to the People and More Accessible

Of all the scientific evidence linking parks to physical activity, the strongest evidence is the relationship between close access (proximity) to parks and physical activity. Ensuring adequate park access and proximity for all Americans should be a top priority. First, there is a need to create new park and recreation facilities in close proximity to where Americans currently live, learn, work, and worship. In some cases, particularly in fast-growing regions of the nation, there is a need to build new park and recreation facilities or new connections to these places.

Next, there is a need to enhance travel connections to new and existing park and recreation facilities. Improving access to known park opportunities could focus on better transit connections in two ways: by creating connector routes (dedicated paths, sidewalks, trails) to parks from residential areas, schools, workplaces, and shopping areas, and by changing policies to allow existing parks and playgrounds to be used by a wider cross section of the population.

Design and Renovate Parks to Increase Physical Activity Across the Life Span

There is a need to ensure that park and recreation facilities can pull in visitors by providing an array of interesting and active recreation opportunities. Existing evidence has demonstrated that the presence of active park features and supports is linked with higher use levels and moderate-to-vigorous physical activity.

Promote Parks and Recreation Services as an Essential Component of the Healthcare System

How park and recreation services are positioned or perceived is ultimately determined by stakeholders in relation to other services. Particularly within municipal and urban contexts, park and recreation agencies should consider health and active living as the central positioning platform for changing or reinforcing the perceptions of participants, legislative bodies, partners, and staff.

Lack of awareness of local park and recreation opportunities is a reason that people often report for not utilizing these services. To change this, support from prestigious and well-funded business and media partners is needed to convey a unified health and active-living message stating that local park and recreation services are ideal places to be physically active across the life span.

Create More Recreation Programs That Provide Physical Activity

Organized recreation programs are a recommended strategy to increase the nation's physical activity. Eight out of 10 NRPA member agencies offer fitness, sport, and family-youth programs for their constituents at low cost. To expand capacity, park and recreation programming should target a wider cross section of the public and offer a wider menu of programs.

Park and recreation agencies must partner with and promote recreation programs to entire organizations. Traditionally, however, they have promoted their services to individual households, with mixed results. A number of studies show that some segments of the population are unaware or have a minimal knowledge of such services. Lack of awareness is greater among lower-income households, which might benefit the most from increased physical activity.

Make Sure Park and Recreation Providers and Participants Focus on Physical Activity and Health Outcomes

Park and recreation professionals and volunteers could benefit from enhanced training concerning how to maximize physical activity benefits. In many cases, providing physical activity benefits has not been a priority of service providers. This means incorporating physical activity education and training within existing continuing education, park and recreation university curricula, and in school-based physical education programs. Providers from outside the park and recreation field must also be a target of training.

Finally, there is a need to design park and recreation programs and spaces to encourage or provide social support for active recreation behaviors. Social support groups can help others set individual goals, can provide positive encouragement and enforcement, and can help participants sustain their physically active behaviors within park and recreation services and settings.

Enhance Partnership Strategies to Connect With Health-Related Organizations

Stand-alone professionalism is dead. Park and recreation personnel are increasingly engaging in collaborative partnerships, seeking new partners that will assist in communicating, delivering, and evaluating park and recreation services to provide physical activity. Research shows that programming (special events, health fairs and screenings, active programs) is the predominant partnership strategy used to promote physical activity. Future health partnerships must also focus on creating more active park features, on creating activity-friendly policies, and on identifying funding sources for these efforts.

Develop New Policy and Funding Alternatives to Expand the Physical Activity Impact of Parks and Recreation

It is necessary to expand the role of park and recreation policy in shaping physical activity. Policies must be established for ensuring that there are park and recreation facilities within a certain distance of population centers and establishing hours of operation that ensure use across a broad spectrum of the population. Also needed are program policies that incorporate recommended levels or bouts of physical activity provided through park and recreation services. Additional policy areas should include pedestrian and bicycle networks, funding policies to support the capacity of park and recreation agencies in fulfilling their physical activity goals, promotional and communication policies, health partnerships, evaluation, and training.

Evaluate Park and Recreation Services' Contributions to Physical Activity

While a growing number of studies are documenting the role of park and recreation services in promoting physical activity, there is a need to further substantiate and extend the evidence base at local, state, and national levels using more advanced monitoring tools and systems.

In summary, public park and recreation agencies have been shown, through an emerging body of scientific research, to play an important role in providing for physical activity for a broad cross section of the American public. The potential exists for parks and recreation to play an even larger role in increasing the physical activity of the American public, and at modest cost.

Benefits of Physical Activity Provided by Park and Recreation Services

Why Do Park and Recreation Services Provide So Much Physical Activity for So Little Money?

People move their bodies either because they have to or because they want to. The necessity of moving one's body in daily life has declined dramatically. If paid work, housework, and leisure are all examined for the extent to which they contribute to physical activity, the evidence suggests that leisure is now the part of life where the most physical activity occurs. (Chow, 2007; Trojani et al., 2006).

People experiment with forms of physical activity that are good for them although often not pleasurable, but stay with activities that they enjoy (Henderson and Ainsworth, 2002). Such activities include walking, hiking, jogging, running, bicycling, individual and team sports, unstructured and playground play, water-based recreational activity, dancing, bird and other animal watching, wildlife photography, and hunting and fishing.

While fitness clubs and prescription exercise are valuable, individuals are actively involved in such activity for short periods of time, often only three to six months (Librett, 2008; Ecclestone, Myers, and Paterson, 1998; Oldridge, 1982). Cost is also a factor, since the average cost of a personal trainer is \$60 to \$70 per hour (Arria, 2010). A physically active leisure activity that is inherently enjoyable to the individual, however, may be undertaken for several decades. When such activity is undertaken in public park and recreation settings, it costs dramatically less.

Park and recreation services provide close-to-home, free or low-cost, readily available areas, facilities, programs, and instruction, which therefore provide pleasurable physical activity opportunities. These services are used by the vast majority of the public and would be used to an even greater extent if additional investments were made in them (Active Living Research, 2010). The scientific evidence is compelling that investment in close-to-home recreation and park services is associated with significantly higher rates of physical activity with health benefits. A recent systematic literature review by Kaczynski and Henderson (2007) summarized the evidence concerning park and recreation setting proximity and physical activity. Eight of the 13 articles that specifically examined parks and physical activity concluded that there were some positive associations between park proximity and physical activity.

A variety of health-related organizations now recognize parks and recreation as a health service and part of the healthcare system. This has led to the widespread use of health-related partnerships between varieties of organizations concerned with various aspects of health, from hospitals to public health departments to health insurers. It has also led organizations such as the Robert Wood Johnson Foundation, the National Physical Activity Plan, the President's Council on Physical Fitness and Sports, the RAND Corporation, Resources for the Future, and First Lady Michelle Obama's Let's Move Outside Campaign to study and acknowledge the important role that parks and recreation play in providing physical activity opportunities, which lead to widespread health benefits. (See, for example, Godbey, 2009.) Medical journals now regularly publish articles on the role of parks and recreation in enhancing health (e.g., Godbey, Caldwell, Floyd, and Payne, 2005; Bedimo-Rung, Mowen, and Cohen, 2005).

Physical Activity Benefits From Park and Recreation Services

Park and recreation services are an important provider of opportunities for physical activity for people of all ages and backgrounds. These opportunities are as diverse as walking on a trail or a golf course lined with trees, running after a fly ball, swimming in a municipal pool, attending an exercise class designed for seniors, climbing on playground equipment, or shooting a basketball in a wheelchair basketball game. These opportunities for physical activity are sponsored by local government, with others available from county, state, or federal government.

Americans Use Park and Recreation Services Extensively

Americans use park and recreation services extensively for physical activity, and when there is investment in high-quality services, they use them even more. The following indicates the widespread use of these services.

At the municipal level, an early study showed about four out of five Americans used local government park and recreation services (Godbey, Graefe, and James, 1992). Furthermore, a recent five-city study of middle-age and older adult users (50 and older) of local parks found that 85% had visited a local park in the last 12 months.

Use Rates of Local Park and Recreation Services (Age 50 and older)
38% once a week or more
21% one to three times per month
25% less than once per month
15% never

Source: Godbey, Payne, and Orsega-Smith, 2004.

Almost four out of 10 used these services once a week or more, indicating that park and recreation use was part of their lifestyle.

At the federal level, the following percentages of the public participated in outdoor recreation at the following settings for at least once per year: Bureau of Land Management, 9%; Army Corps of Engineers, 14%; U.S. Fish and Wildlife Service, 22%; USDA Forest Service, 28%; and National Park Service, 32% (Roper ASW, 2004).

In terms of state parks, the National Association of State Park Directors reports that state parks received 735 million visitors in 2001, and 67.5 million of these visitors stayed overnight www.naspd.org.

Historically, use of park and recreation services increases during economic downturns. A 2009 Trust for Public Land report suggests the economic downturn has spurred a sharp increase in public park and playground use among families with kids, especially those with children younger than 6.

Greater Use of Parks and Playgrounds in 2009
<p>Park users with children in the household:</p> <ul style="list-style-type: none"> greater use: 30% same use: 60% less use: 10%
<p>Park users with children under age 6 in the household:</p> <ul style="list-style-type: none"> greater use: 38% same use: 51% less use: 10%

Source: The Trust for Public Land, 2009.

People Are Very Often Physically Active When Using Park and Recreation Services

People commonly use park and recreation services in ways that involve physical activity and contribute to their physical health. In terms of parks, for example, walking is the most common form of physical activity taking place, with riding bicycles and jogging also important. Many people also walk or bike to and from the park, adding to the activity value of the visit. A study of Chicago Park users, for example, found 45% participating in “active-individual activities” (e.g., walking, jogging) and 23% in active team sports during their visits (Gobster, 2002). At Cleveland Metroparks, 44% of users reported walking or hiking as their primary activity. This ranked second behind “relaxing” (49%).

Walking for pleasure or exercise has been found to be a common activity for older adults in parks (Scott, 1997). Walking is a common denominator behavior of most forms of park use. Exercise such as brisk walking for three hours a week—or just a half-hour a day—is associated with a 30% to 40% lower risk of heart disease in women (AARP, citing the 20-Year Nurses’ Health Study). Walking has been shown to have the following health benefits for older adults.

Health Benefits of Walking for Older Adults

- managing weight
- controlling blood pressure
- decreasing risk of heart attack
- boosting “good” cholesterol
- lowering risk of stroke
- reducing risk of breast cancer and type 2 diabetes
- avoiding the need for gallstone surgery
- protecting against hip fracture
- preventing depression, colon cancer, constipation, osteoporosis, and impotence
- lengthening life span
- lowering stress levels
- relieving arthritis and back pain
- strengthening muscles, bones, and joints
- improving sleep
- elevating overall mood and sense of well-being

Source: AARP, 2007.

A study of six Pennsylvania state parks (Mowen, Trautvein, Graefe, and Ivy, 2009) found that almost two-thirds of respondents (63%) reported being moderately or vigorously active during their visit. Overnight state park visitors reported 90 minutes of moderate and 49 minutes of vigorous activity on average per day, while day users reported an average of 68 minutes of moderate and 68 minutes of vigorous activity. A study of municipal parks also found that one-third of park visitors were active at the actual time they were observed (Cohen et al., 2007).

Middle-age and older adults are usually physically active in parks and perceive exercise as an important benefit of park use (Tinsley, Tinsley, and Croskeys, 2002). A study of middle-age and older park users in Cleveland, Ohio, for example, found that more than 69% obtained moderate or high levels of physical activity. An average visit lasted about two hours, and users spent about half their time walking (Payne, Orsega-Smith, Roy, and Godbey, 2005). Another study of older adult users of a large metropolitan park found that 55% of such park users walked or hiked while in the park. Other activities included walking dogs, playing with children, bicycling, and swimming (Raymore and Scott, 1998). These studies offer some evidence of the capacity of public parks to enhance physical activity.

In many studies, ethnic minorities constituted an important user group for physical activity. A study of how residents in low-income, minority communities use urban neighborhood parks, for instance, found that more males than females used the parks, and males were twice as likely to be physically active. Interviewees identified the park as the most common place they exercised. Proximity to the park predicted both park use and exercise levels. It was concluded that public parks are critical resources for physical activity in minority communities (Cohen et al., 2007).

Availability and accessibility to physical resources often differ by neighborhood according to the socioeconomic status of residents (Wolch, Wilson, and Fehrenbach, 2005). Individuals from lower SES neighborhoods may have limited ability to control their physical activity in the face of inaccessible environments. In spite of this, public parks and recreation programs are important resources for low-income minority communities.

“Public parks are critical resources for physical activity in minority communities. Because residential proximity is strongly associated with physical activity and park use, the number and location of parks are currently insufficient to serve local populations well.”

(Estabrooks, Lee, and Gyurcsik, 2003, p. 509)

The Public Strongly Identifies Physical Activity Benefits From Park and Recreation Participation

When members of the public are asked about the benefits they get from recreation and park services, exercise and benefits from physical activity are readily recognized (Graefe, Mowen, and Covelli, 2009; Godbey, Graefe, and James, 1992; Mowen et al. 2009b). Survey respondents report the following as the top three benefits of using park and recreation facilities (ranked in order of frequency): exercise, enjoyment, and improving physical health.

Recreation programs, use of recreation centers, and other nonpark opportunities provided by park and recreation departments also provide considerable physical activity. For example, a large study of middle and high school students found that use of a community recreation center was associated with an increased likelihood of engaging in high-level moderate to vigorous physical activity (Gordon-Larsen, McMurray, and Popkin, 2000). These authors concluded that their observational data “showed that more people used specific areas when they were provided organized activities, suggesting that increasing the availability of structured, supervised activities will also likely increase park use; however, only 9% of all observations found areas supervised, suggesting that greater attention should be paid to staffing” (Gordon-Larsen et al., 2000).

Benefits Ascribed to Use of Cleveland Metroparks by Middle Age and Older Users*	
BENEFIT	PERCENTAGE
Exercise	48
Renewal	21
Nature	16
Health	6
Other	9
Total	100

Source: Payne et al., 1998.

Investing in Park and Recreation Services Increases Physical Activity Benefits

The amount of money spent on parks and recreation varies greatly from state to state, county to county, and city to city (Crompton and Kaczynski, 2004; Crompton and Kaczynski, 2003). This is true both for the operating budgets of such agencies and capital expenditures to develop new park sites, recreation centers, swimming pools, and so on. There is a strong relation between how much money is spent to provide such services and the number of physical activity health benefits received (Cohen et al., 2009).

On average, more spending means more recreation areas and facilities, more recreation programs that involve physical activity, more close-to-home opportunities, more provision for people with disabilities, and better programs. The relationship between investment in parks and recreation and the amount of exercise of boys and girls was very clearly identified in a nationwide study using data on high school students from the Youth Risk Behavior Surveillance System (Cawley, Meyerhoefer, and Newhouse, 2007).

“... an extra \$10 spent per capita on parks and recreation was associated with a third of a day more per week of vigorous exercise by girls. State spending on parks and recreation was also associated with more days of strength-building exercise for both sexes. An additional day of this type of activity was associated with an extra \$50 per capita spending for boys and \$21 for girls. “

(Cohen et al., 2009)

This study, like many others, directly implies that a small increase per person in spending for parks and recreation may have significant positive effects on amount of physical activity and in health-cost savings and human happiness. It should be noted that, in 2007, the average cost for visiting a primary care physician in the United States was \$100 (Agency for Healthcare Research and Quality, 2007).

While the public is still not highly aware of the direct savings in healthcare costs resulting from park and recreation services, there is considerable long-term sentiment for spending more for park and recreation services. Analysis of public sentiment from 1984 through 2006 shows that about one-third of the public thinks too little is spent on parks and recreation, while only about 6% think too much is being spent (Smith, 2007).

Parks and recreation may be an extremely cost-effective way to improve health and lower health expenditures by providing diverse opportunities for physical exercise. To put the previously mentioned \$10 figure in perspective, healthcare costs per person in the United States have topped \$8,000 in 2009, with almost none of the money going to prevention. Those costs are projected to reach \$13,000 in 2018 by the U.S. Department of Health and Human Services (U.S. Department of Health and Human Services, 2009).

In spite of this, the amount of parkland per resident has actually declined due to rapid increases in population (American Society of Civil Engineers, 2009). According to the American Society of Civil Engineers, the projected shortfall in funding for public parks and recreation is estimated at \$48.17 billion over the next five years. Even the size of this projection may be too low, as state parks have closed in several states during late 2009 and early 2010.

Park and recreation spending may be an easy target for budget hawks, but in reality state spending on parks represents an extremely small part of overall expenditures—0.231% on average across the nation. California's percentage was the highest in the country, but was still less than 1% of the state's overall state budget (0.979%) (American Society of Civil Engineers, 2009). Park and recreation investment needs to be increased at the national, state, and local level.

The Supply of Park and Recreation Resources Is Directly Related to Amount of Physical Activity by People of All Ages

When people use parks and playgrounds, they are usually outdoors. Three studies of preschool children used direct observation and reported that being outdoors was the strongest correlate of children's physical activity (Sallis, Prochaska, and Taylor, 2000). It is highly likely that the same is true for other age groups.

It is not surprising, therefore, that research has shown that the number and area of parks and playgrounds in a community are positively related to physical activity levels. Numerous studies document this connection. For example, a study of some 500 older adults from 56 neighborhoods in Portland, Oregon, found that both the number of recreation facilities and the amount of green or open space were significantly related to high levels of walking (Li, Fisher, Brownson, and Bosworth, 2005).

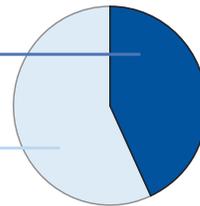
Another study of recreational supply in West Virginia found that total county acres managed by public agencies and total county acres devoted to water-based recreation were positively related to countywide physical activity. Counties with more public land and recreational water acreage also had a lower proportion of the population reporting insufficient physical activity (Rosenberger, Sneh, Phipps, and Gurvitch, 2005). A similar study in Oregon found that recreational trail densities were positively related with the proportion of adults who were physically active (Rosenberger, Bergerson, and Kline, 2009).

ESTIMATED 5-YEAR FUNDING REQUIREMENTS FOR PUBLIC PARKS AND RECREATION

Total investment needs
\$85 BILLION

Estimated spending
\$36.835 BILLION

Projected shortfall
\$48.17 BILLION



Source: American Society of Civil Engineers, 2009.

A few studies have examined the impact of parks and recreation on the physical activity of young children. Findings show that, among the factors that predicted how much physical activity 8- to 12-year-olds get in their neighborhoods, a 1% increase in park and recreation areas was associated with a 1.2% to 1.4% increase in physical activity (Roemmich, Epstein, Raja et al., 2006). These findings are particularly important, since they indicate that the sedentary leisure behavior of youth (e.g., playing video games) can be minimized when there is more investment in neighborhood recreation and park facilities. A child's decision to stay in the home or play outside depends, in part, on the available alternatives at each location. Commonly available park playground equipment or organized physical activities have been found to be equally reinforcing for young boys and girls to be physically active (Epstein and Roemmich, 2001).

Nonwhite children often do not have access to parks and schoolyards in their communities, and often they also do not have access to cars or a decent transit system to reach neighborhoods where the parks are (Giles-Corti and Donovan, 2003; Gobster, 2001; Garcia, 2002). All children need places where they can be physically active regularly. The most important places appear to be outdoors and in the neighborhood and include both public parks and commercial facilities.

Because children engage in such a variety of activities and because their recreational needs vary widely by age, providing many different types of facilities is a promising policy objective (Sallis and Glanz, 2006). “No Place to Play,” a research report from The Trust for Public Land, however, finds that two-thirds of children 18 and under in Los Angeles do not live within walking distance of a public park (Trust for Public Land, 2009b).

Access to playgrounds is also an important variable shaping children’s leisure choices. A Gallup Organization study, which surveyed 1,200 individuals, found that less than half of American children have a playground within walking distance of their homes. Sixty-one percent of Americans say simple lack of access to a playground is a barrier to their children playing on one, and one-third feel there are not enough playgrounds in their community to serve the number of children who live there. Two of three surveyed agree that using a playground is a deterrent to watching television (Gallup Organization, 2009).

Children who regularly spend unstructured time outside:

- play more creatively
- have lower stress levels
- have more active imaginations
- become fitter and leaner
- develop stronger immune systems
- experience fewer symptoms of ADD and ADHD
- have greater respect for themselves, others, and the environment

Source: *GreenHour.org*.

Having Park and Recreation Services Close to Home Increases Use and Physical Activity Benefits

How close a person lives to a park or recreation opportunity (proximity) has a great influence on whether or not he participates and how frequently. Closer is better and more is better. Whether it is a park, recreation center, recreation program, playground, or other recreation amenity, distance from one’s home to the opportunity in question is an important factor in whether or not the person will use it and, if he does use it, how often he will use it.

Various studies show that people more than one mile away are less likely to participate than those one mile away or less. Those a half-mile away are more likely to participate than those further away; and those who are within walking distance are more likely to participate than those who are not. When people are asked about their access to recreation facilities, those who say they have better access are more physically active.

“Having a park within walking distance from one’s home was the strongest predictor that a middle-age or older person would use a park.”

(Godbey, Payne, and Orsega-Smith, 2004)

Beginning in the 1960s, studies showed an inverse relationship between recreation participation and distance between a place of residence and recreation opportunity (Cicchetti, Seneca, and Davidson, 1969). This is true for a variety of facilities and programs that provide opportunities for physical activity. The closer people live to a bikeway, for example, the more likely they are to use it (Gordon-Larsen, McMurray-Dagger, and Popkin, 2000).

Having recreation or open space close to home has been found to be positively related to the frequency and length of walking among youth (Frank, Kerr, Chapman, and Sallis, 2007).. Having a park within walking distance of one's home is a strong predictor of whether or not middle age and older people will use the park (Mowen, Orsega-Smith, Payne, Ainsworth, and Godbey, 2007). The same has been found for adolescent girls, Hispanics, African-Americans, and many other population groups.

A study of adolescent girls across six cities, for example, found that girls who had a higher number of parks within close proximity to their home (less than one mile) were more likely to achieve higher levels of physical activity than girls who had fewer parks near their home (Cohen et al., 2006).

Participation in recreation activities and programs also has been shown to increase when the person lives closer. A study of adults residing in New York City; Baltimore, Maryland; and Forsyth County, North Carolina, found that adults were 28% more likely to participate in recreation activities if there were park and recreation facilities within five miles of where they lived. Having facilities within one mile was associated with significantly higher levels of physical activity among Hispanics and African-Americans (Diez-Roux et al., 2007).

In summary, the scientific evidence points to the importance of park and recreation services in contributing to leisure-time physical activity behaviors and benefits across a number of contexts. However, the capacity and potential of park and recreation services in creating a more physically active America is not fully realized. A number of strategies should be considered and supported in order to maximize the physical activity benefits of our services. What follows is an overview of potential action steps and examples, which incorporate variety of environmental, promotional, programmatic, people, partnership, policy, and evaluation strategies.

Increasing Physical Activity Benefits Through Park and Recreation Services

While the level of physical activity benefits of parks and recreation is currently both substantial and a huge bargain financially, the level of benefits may be greatly increased at comparatively low cost. Recent evidence suggests a number of ways. Efforts to increase park and recreation services use and physical activity should focus on providing services that Americans find attractive and easy to use on a regular basis.

This section provides recommendations that could increase the level of health and physical activity benefits provided by park and recreation services. They should be considered and pursued in combination (rather than in isolation) due to their overlap. Seven recommendations follow.

Get Park and Recreation Services Even Closer and More Accessible

Of all the evidence linking parks to physical activity, the strongest evidence is the relationship between close proximity or access to parks and physical activity. Ensuring adequate park access and proximity to all Americans should be a top priority.

What defines sufficient park access is open to debate. For some it means being able to safely and easily walk, bike, or drive to these spaces from their homes, offices, schools, and other community spaces. NRPA's vision is that, by 2020, every person in America will have convenient access to safe and affordable public park and recreation opportunities. Three strategies should be pursued: creating new parks, increasing access to existing parks, and modifying the opportunities provided in parks to promote more widespread and active use.

Create new park and recreation facilities in close proximity to where Americans currently live, learn, work, and worship.

There is a need to build new park and recreation facilities and new connections to these places. Fast-growing population centers should be targeted as well areas with poorer access to park and recreational spaces.

Land acquisition is a challenging and long-term process, so full support from conservancy and interim owners is needed to help secure spaces for future parks. In some cases, this may involve in-filling parks into spaces that were formerly used for other purposes (e.g., brown fields) like the old Kona Airport (see Sidebar Example 1) Urban areas are challenged by limited space and resources to develop additional parks, particularly large ones. However, significant benefits can be derived from smaller pocket parks, particularly if active play options are provided in these spaces. Moreover, creating new parks and new park connectors from former industrial/commercial sites is an emerging tool being used to build urban park capacity (Mowen and Confer, 2003; Siikamaki and Wernstedt, 2008).

Example 1: Enhancing Community Access and Proximity to Parks and Trails

There are a variety of conventional and unconventional ways to improve people's access to active park environments. For example, in west Hawaii, the closing of the old Kona Airport provided an opportunity to develop the property as a park, which provides options for active recreation such as walking. A grassroots nonprofit organization, Friends for Fitness, worked with community organizations to revitalize and expand this property for public recreation opportunities. Funding from the Hawaii Department of Health was used to renovate the walking and jogging sections of paths within this area. These changes, combined with aggressive grassroots promotion and programming, resulted in increased use of this space and increased physical activity levels among park users.

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“Creating new parks and new park connectors from former industrial and commercial sites is an emerging tool being used to build urban park capacity.”

Enhance travel connections to new and existing park and recreation facilities.

Increasing park access is sometimes simply a matter of creating better connections and linkages to existing park and recreation spaces. Park and recreation services might be close to neighborhoods, work sites, shopping areas, and so on, but getting to these spaces is a challenge. Having no way to get to parks or the perception that parks are too far away are common barriers to their use, particularly among low-income populations. In other instances, awareness of nearby opportunities is low, thus people still perceive their access as being poor (Godbey, 1985).

While awareness of park spaces can be addressed with collaborative promotional strategies, enhancing access of known park opportunities could focus on enhanced transit connections through partnerships with the community planning and transportation sectors by creating connector routes (dedicated paths, sidewalks, trails) to parks from residential areas, schools, workplaces, and shopping areas. Also, changing policies could allow existing parks and playgrounds to be used by a wider cross section of the population (see Sidebar Example 2). Where possible, active transit to parks should be emphasized (e.g., sidewalks, trails and paths, bicycle lanes). Increased accommodation of personal automobiles can also increase perceived park access, providing ample and safe parking options near parks.

Example 2: Improving Playground Access Through Open School Grounds

In some cases, there are potential recreation facilities within a community, but they are not available to the public at large. For example, in New York City, 746 school playgrounds stay locked on weekends and in the summer. These spaces represent 948 acres of unused public space that could immediately provide New Yorkers with enhanced park access.

As part of his plan to ensure that every New Yorker lives within a 10-minute walk to a park, Mayor Michael Bloomberg announced the Schoolyards to Playgrounds initiative (PlaNYC), which seeks to open these facilities to the general public. Funding was allocated to this initiative, and private and nonprofit sponsors were sought to contribute to park improvements and recreation program provision. The Trust for Public Land has partnered with the city and is working toward converting 25 schoolyards into new community playgrounds over the next five years.

Once open, the schoolyards will be managed by the Department of Education in conjunction with local community organizations. Converting schoolyards to community park and playground spaces is a promising strategy to enhance park access for many communities, but close collaboration, support, and funding from other sectors (e.g., education, public health) is needed to ensure that such initiatives can sustainably provide access to safe and high-quality recreation spaces. More information on the New York City Schoolyard Conversion initiatives can be found at: www.nycgovparks.org/sub_about/planyc/playgrounds.html.

Although building new park facilities and connectors may encourage greater use, it may not necessarily increase activity levels over a sustained period of time. Resources, funding, and supportive policies are needed to maintain this expanded infrastructure over the long term. Moreover, the characteristics of individual park and recreation spaces also influence the level of physical activity occurring.

Design and renovate parks to enhance active options across the life span.

There is a need to ensure that park and recreation facilities can pull in visitors by providing an array of interesting and active recreation opportunities. Existing evidence has demonstrated that the presence of active park features and supports is linked with moderate-to-vigorous physical activity. For example, physical activity and leisure studies researchers have found that parks with paved trails, sport fields, playgrounds, restrooms, and other park support features are more likely to attract higher visitation and increased levels of moderate-to-vigorous activity than parks without these features (Floyd, Spengler, Maddock, Gobster, and Suau, 2008; Kaczynski, Potwarka, and Saelens, 2008; Rung, Mowen, Broyles, and Gustat, 2010).

“The presence of active features at parks (e.g., trails, sport fields, playgrounds) enhances park use and physical activity levels.”

Park design should focus on creating spaces where families feel safe. Design should allow childhood play and adolescent activity to be monitored at a close distance by adults who are engaging in their own recreational activities. Park designers, advocates, and manufacturers are responding to this need by developing spaces and play features that promote increased physical activity, not only for children but also supervising parents and a wider age range of youth.

Moreover, playground manufacturers are creating play structures that encourage physically active play. For example electronic play systems for playgrounds are being specifically designed to enhance individual and shared physical activity for youth and adults. These play systems combine the speed and fun of

electronic video games with the explosive bodily movement of aerobic exercise. Early evaluations of these types of play features have found that they delivered physical activity comparable to jogging or playing soccer, raising heart rates by an average of 20%.

Another example of changes in playground design is the movement toward connecting active play to nature. To address the trend of “nature deficit disorder,” playground manufacturers are designing and marketing play structures that are not only active but also nature-themed.

Equipment manufacturers and park planners are also positioning park and trail networks around play and activity spaces in order to encourage adults to walk in parks while their children play on adjacent sports fields and playgrounds, for example. The development of exercise stations on these trails is not a new concept, but recent product developments have improved their attractiveness across a broader cross section of park users and have juxtaposed these stations within close proximity to play spaces. Parents and grandparents can be active next to their little ones. Outdoor fitness and trail equipment now include stations designed to provide adults and older adults with age-appropriate exercises that are patterned after the movements of everyday life, along with easy-to-use and legible instructional signage.

Providing outdoor park activity spaces alongside or adjacent to community centers and schools is also an important consideration to maximize participation and use. The coplacement of parks and community centers could make it easier to staff and provide a wider menu of supervised park programs. Parks attached to these centers may also be perceived as a safer and more controlled environment by parents.

In general, providing a wider variety of recreational opportunities, walking paths, skateparks, active playgrounds, sport fields, spray park zones, and so on could make park spaces more attractive to a wider cross section of the population. These park activity features should also be augmented by high-quality support features such as benches, water fountains, shade, picnic areas, and restrooms. Adding these features and activity opportunities will come at a cost—for both construction and ongoing maintenance.

Moreover, these new types of park features will need to be maintained and staffed if their impact on physical activity is to be sustainable. Unfortunately, funding cuts at the local, state, and federal levels are severely restricting the ability of today’s park and recreation organizations to maintain and modernize this critical element of the public health infrastructure. New funding approaches or a recommitment to current funding mechanisms is needed to ensure that these park innovations can continue across the nation’s community parks.

Example 3: Enhancing Physical Activity Opportunities Within Parks

In 2010, the city of Allentown, Pennsylvania, completed renovations of Cedar Creek Parkway. These renovations were designed to attract new park visitors and increase physical activity levels of park visitors, particularly youth. State and local grants were used to improve the walking and jogging trail network, provide modernized park support facilities (water, restrooms, pavilions), and create a multigenerational destination playground that provided a wide range of play features for young children, teens, and older adults. The new playground provides features for children of all abilities and was designed with the support of parents of children with disabilities.

An important motivation in providing this active venue was a report that 48% of the children in Allentown are considered overweight or obese. The playground includes the newest in technology and also a youth fitness trail that was designed to draw and encourage children to play and exercise. In addition to this new playground, the city of Allentown also expanded and enhanced the trail system at this park. The trails have been renovated and bike lanes will be designated to provide a stable surface for bikes, strollers, and wheelchairs, as well as allow the trails to be cleared of snow and open for year-round use. Lighting was also added along the main trail to enhance safety and security. An evaluation of these park improvements on park use and physical activity is under way.

“Today’s park renovations and redesigns could be made with an eye toward active participation from all visitors by providing a wide range of active features.”

Promote Park and Recreation Services as an Essential Component of the Healthcare System

Positioning is a key element of park and recreation agencies’ efforts to successfully compete for resources. According to Kaczynski and Crompton (2004, p. 1), “positioning” refers to influencing the place that organizations hold in the minds of their stakeholders relative to competitive services. How park and recreation services are positioned or perceived may be influenced by the agency but is ultimately determined by stakeholders themselves in relation to other services. Successful positioning requires a consistent and tight focus, with a selected message over a sustained period of time.

We contend that, particularly within municipal and urban contexts, park and recreation agencies should consider health and active living as the central positioning platform from which to change or reinforce the perceptions of participants, legislative bodies, partners, and staff. Within promotional campaigns at the local, state, and national level, park facilities and recreation services should be positioned as interesting, enjoyable, and accessible in terms of awareness, proximity, and low cost. There is a need to grow beyond the current promotional mix, which relies on public relations, and engage in community and nationwide advertising campaigns. To do this, support from prestigious business and media partners is needed to convey a unified health and active-living message.

“Large-scale advertising or promotion of parks and recreation can be used to position them as a fun alternative for enjoyable physical activity.”

Recent efforts to broadly communicate the health benefits of parks, youth sport, and physical activity are promising and illustrate the progress that the field is making in positioning toward a wider audience.

Promotional campaigns should involve major media corporations such as Google, Facebook, and Twitter as well as other major corporations with massive advertising budgets. Facebook in particular has shown promise as a communication tool for smaller park and recreation agencies. Following the Sports Illustrated/NRPA success story, other corporations could partner with parks and recreation to provide in-kind coverage of physical activity promotion through local and community park and recreation services. Key health opinion leaders such as Dr. Mehmet Oz, Dr. Sanjay Gupta, and The Doctors television program could feature local park and recreation services cooperatively with national park and recreation leaders.

Create More Recreation Programs That Provide Physical Activity

In many communities, park and recreation agencies offer a wide variety of programs that appeal to people across the lifespan. In particular, eight out of 10 NRPA member agencies offer fitness, sport, and family and youth programs for their constituents at low cost (Mowen et al., 2009a). In fact, programmatic efforts have been the dominant approach used by park and recreation agencies to provide physical activity opportunities across the life span.

The reach and physical activity focus of the current programming mix could be further expanded. For example, a nationwide study found that only 30% of Americans participated in local park and recreation programs annually (Godbey, Graefe, and James, 1992). Constraints to program participation include family and work commitments, a lack of interesting program content, low awareness of offerings, and in some instances, costs.

Example 4: Physical Activity Campaigns, Promotions, and Advertising

In 2003 and 2004, NRPA and Sports Illustrated magazine partnered in a national campaign to promote community sport and communicate the benefits of park and recreation services. As part of this strategic alliance, titled “Healthy Lifestyles and Livable Communities: It Starts in Parks!” Sports Illustrated provided NRPA and the profession at large with in-kind, national-level exposure with the placement of 18 full-page advertisements.

www.nh.gov/oep/programs/recreation/documents/healthagenda.pdf

VERB Campaign

Another national media campaign was CDC’s VERB campaign (2002-2006), conducted by the Centers for Disease Control and Prevention (CDC). This evidence-based campaign has received critical acclaim and has provided a great deal of visibility for physical activity promotion. VERB promotions provide separate messages to both parents and children (tweens). What distinguishes VERB from traditional public service announcements (PSAs) is that advertisement placements are purchased, enabling greater control of when and where advertising appears. VERB messaging has been featured on television, print, and radio (e.g., Cartoon Network, Nickelodeon, Black Entertainment Television, Sports Illustrated for Kids, Seventeen). The level of funding provided enabled VERB to compete with commercial youth marketers to capture the attention of tweens. (www.cdc.gov/youthcampaign)

Step Up To Health

NRPA’s Step Up To Health (SUTH) campaign provides a nationally branded structure for park and recreation agencies to advance their position as a health leader in their community. More than 860 communities have participated as a Step Up To Health community. Moreover, a toolkit including resources from CDC’s VERB campaign was provided to SUTH communities. This toolkit consisted of parent-targeted advertising and publicity tools used by the VERB campaign. NRPA members and affiliates are currently the largest group of youth-serving organizations that implement VERB promotional programs on a nationwide basis. (www.nrpa.org/health)

Let’s Move Outside!

Lastly, as part of nationwide PSAs in 2009 and 2010, President Barack Obama highlighted the importance of parks and recreational activities. For example, his message to fathers was to “play catch, go to a park or visit a zoo. “The president also participated in the NFL’s PLAY 60 campaign and encouraged community service through this PSA. He urged Americans to get involved by cleaning up at a local park or taking the time to build a playground. In February 2010, First Lady Michelle Obama’s campaign to tackle childhood obesity (Let’s Move) was covered by national media. While the role of parks and outdoor/nature recreation in addressing physical activity was not identified as a key pillar of the early initiative, it was integrated into the current Let’s Move Outside! program. (www.letsmove.gov/outside/index.html)

Increase physical activity opportunities within existing programs.

A more concerted effort to increase physical activity knowledge and behaviors within existing park and recreation programs is under way. Through enhanced training and program development, a wider range of existing park and recreation program offerings could be redesigned to specifically incorporate moderate or vigorous bouts of physical activity. For example, researchers have found that physical activity breaks within organizational and business meetings and at spectator sporting events are a promising strategy to incorporate activity within one's daily life (Yancey et al., 2009). Perhaps it is possible to extend these activity breaks across a broader range of park and recreation programs.

Another option for integrating physical activity into programs is the integration of "stealth activity" that incorporates walking, running, lifting, stretching, and strengthening as part of the program activity. These stealth activities are a spontaneous part of the program design, and participants may not realize that they are exercising. Program leaders can take an active role in encouraging spontaneous activity as part of their program delivery by encouraging physically active behaviors and requiring participants to opt out of these activities (rather than asking participants to opt in to these physical activity breaks) (Yancey et al., 2009, p. 324).

"A wide range of park and recreation programs could be modified or adapted to include bouts of moderate-to-vigorous physical activity."***Develop and provide additional recreation programs that promote intrinsically enjoyable physically active recreation.***

Many park and recreation programs now focus specifically on health benefits as part of their content messaging and behaviors (e.g., health fairs and screening programs, walking clubs). The health community should be enlisted to help inform and drive participants to these programmed activities. For example, informed physicians could recommend that their patients enroll in recreation programs as part of their wellness prescriptions. New recreation program options should target those individuals who are at risk of being inactive but may need just a little support or encouragement to participate. Youth, particularly those not engaged in competitive sport programs, should be provided an opportunity to learn physical activity skills that can be tapped throughout their life span.

Park and recreation agencies should continue to work with schools and public health partners and develop additional recreation programs that help children identify leisure and physical activities that are interesting and intrinsically enjoyable, and set the stage for a lifetime of activity.

Partner with and promote recreation programs to entire organizations.

Recreation and park agencies have traditionally targeted most of the promotion of their services to individual households, with very mixed results. A number of studies show that large segments of the population are unaware of such services or have a minimal knowledge of them insufficient to allow them to explore the use of such services (Spotts and Stynes, 1984). Several studies show that, for example, significant portions of the population are unaware of specific parks, recreation centers, recreation programs in which they would be eligible to participate, nature centers, and other recreation and park services.

Lack of awareness of services has been shown to be greater among lower-income households, which might benefit the most from increased physical activity. Were recreation and park agencies to promote physical activity programs and facilities to a variety of organizations (which have more ability to reach potential users), participation might increase as well as attendant physical activity health benefits. Using other organizations to promote services involving physical activity could have a multiplier effect in terms of awareness and participation. Large employers within a community, religious organizations, civic

organizations, and a wide variety of other groups that communicate with their clientele via e-mail, regular mail, and other media could greatly reduce lack of awareness.

“Participation in physically active recreation programs could be enhanced by promoting them to entire organizations rather than individuals.”

Make Sure Park and Recreation Providers and Participants Focus on Physical Activity and Health Outcomes

While park and recreation professionals and volunteers have an understanding of their organization's services, they nevertheless may benefit from specialized training on how to maximize the physical activity benefits of these assets. In many cases, providing physical activity benefits has not been thought about as a stand-alone issue. Providers often need to better understand how to link a variety of their constituents to the physical activity resources of their community and should be competent in assessing the physical activity outcomes of their services.

Incorporate physical activity education and training within existing continuing education, park and recreation university curricula, and in school-based physical education programs.

The next generation of park and recreation professionals should receive a more comprehensive understanding of how to leverage the health and physical activity outcomes of their facilities and services. Efforts to modify or extend current university recreation and park curricula to address these issues merit further consideration. For example, shared coursework with allied health partners, the development of new courses focused on leisure and health, and the integration of physical activity training within existing program, facility, marketing, and administrative courses could be pursued.

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“Existing training and curricula should be modified to provide tomorrow’s park and recreation leaders with an understanding of physical activity benefits and strategies to ensure that their services optimize physical activity levels.”

Providers from outside the park and recreation field must also be a target of training and outreach efforts to promote greater use of park and recreation services. For example, leisure education and activity training modules and curricula can be adopted and marketed into school-based physical education programs.

Existing model programs such as Wise Kids (Sajai Foundation) can be disseminated and used within the physical activity curriculum to provide children with information and structural support for using their community park and recreation services as places for enjoyable recreation and sport experiences. Greater collaboration between park and recreation agencies and physical educators is needed to ensure that such curricula can be integrated into an already crowded array of content and programs offered by today's school systems.

Finally, the power of people in encouraging and sustaining physically active recreation should also be harnessed. This goes beyond the training of professional and volunteer staff and educators and focuses on participants themselves. For example, the Guide to Community Preventive Services

Example 5: Physical Activity Education Curricula and Programs in Schools***Sajai Foundation Curricula and Programs to Combat Childhood Obesity***

The Sājai Foundation has developed a number of initiatives and programs to combat childhood obesity and inspire wise health and nutrition choices for youth. A family of programs called **Wise Kids** teaches children about healthy living and encourages them to be actively involved in the outdoors. For example, **Wise Kids Outdoors** is an evaluated after-school and summer camp program that gives children a chance to explore nature and teach them the importance of eating right and being physically active. This obesity prevention program was developed by the Sājai Foundation in partnership with the NRPA and is available nationwide.

Each session (or lesson) covers concepts such as ecosystems, recycling, and the role of critters and bugs outdoors. The concept of energy balance is woven into each lesson to inspire wise nutrition and activity choices and to give children a better understanding of how both humans and nature need to live in balance to be healthy. Evaluation of this program suggested that it positively impacted children's body mass index (BMI) trends and can potentially stem continued BMI increases in participating youth.

(www.sajaifoundation.org/images/WKO_AtAGlance.pdf)

“There is a tremendous potential to incorporate parks and recreation into existing school-based curricula as the foundation for establishing lifelong recreation interests and activities.”

(www.thecommunityguide.org/index.html) concluded that social support strategies were an effective means to help people become more physically active.

Existing programs and facilities can be designed in a way that promotes increased social support for frequent park use and for increased physical activity. Walking clubs and sport activities, for example, could be designed with a buddy system to encourage participation. Park agencies could also encourage greater use of social gatherings and meetings at their facilities. Social support groups can help others set individual goals, provide positive encouragement and reinforcement, and help participants sustain their physically active behaviors within park and recreation settings.

Enhance Partnership Strategies to Connect With Health-Related Organizations

Stand-alone professionalism is dead. While park and recreation agencies and their personnel bring valuable assets to the physical activity crisis, the impact of such services will not be fully realized unless those agencies engage in collaborative partnerships with other disciplines. When doing so, it is important for parks and recreation to move beyond a revenue generation, direct-provider model and for health partners to move beyond a strict medical model.

Recreation and parks has much to offer in the fight to make communities more physically active. There are currently more than 9,000 local park and recreation departments and organizations that:

- manage more than 108,000 public park facilities and 65,000 indoor facilities
- have access to populations most at risk of being physically inactive
- have a wide range of programs lead by skilled program leaders
- have a willingness to partner

A recent survey of health partnerships indicates that recreation and park professionals are “getting it,” with almost nine out of 10 agencies working with an outside organization specifically to promote health, physical activity, and wellness (Mowen et al., 2009b). Despite the pervasiveness of such partnerships, there is significant potential to increase their reach, effectiveness, scope, and sustainability. Strategies could be expanded. Evaluation concerning partnership outcomes could increase. Only 20% of those agencies actively engaging in a partnership formally evaluated the outcomes of their activities (Mowen et al., 2009a).

Increase the impact of physical activity partnerships by attracting new partners and using new approaches to physical activity promotion.

More Partners

Parks and recreation has worked with education and public health sectors but more could be done (and is being done) to reach out to nontraditional health partners. In a recent survey of health partnership practices, park and recreation professionals felt that, while their health collaborations were characterized by high levels of trust and a clear recognition of the problem (e.g., obesity, physical inactivity), there were concerns about partnership equity and level of partner inclusiveness.

In this time of budgetary and resource restrictions, there is a need to engage public transportation, corporations, local businesses, nonprofits, medical firms, health insurance companies, planning organizations, physicians, and advocacy groups.

When establishing collaborative relationships with new partners, it is important to explain why parks and recreation is important in efforts to make Americans more active. Resource guides, fact sheets, and syntheses of scientific evidence could be distributed to targeted health organizations and other potential partners to educate them on the background, purpose, and capacity of America’s park and recreation system. Training efforts and publications that promote the value of health partnerships to organizational board members, staff, and elected officials should be developed and disseminated.

Example 6: Communitywide Health Partnerships With Health Organizations and Corporations

Many park and recreation agencies are reaching out to the health and medical professions to share resources and to cooperatively provide programs that promote active and healthy living. For example, the Columbus (Indiana) Parks and Recreation Department and the Columbus Regional Hospital recognized that they were offering similar services and decided to partner to provide personal training and fitness classes, including aerobics, yoga, pilates, strength training, fall prevention for seniors, and aqua fitness. The hospital provides certified fitness instructors, while the recreation department provides facilities and administrative support. Other costs are shared.

Another example of a health partnership involves collaboration with various health organizations and businesses that participate at health fairs and special events. For example, in Washoe County, Nevada, the park and recreation departments partnered with corporations to provide physical activity opportunities through special events and offer an annual health, fitness, and fun fair coinciding with National Health Week and National Immunization Week.

At this event, doctors, chiropractors, public health educators, hospital representatives, and others serve as vendors who provide health promotion tips and conduct free health screenings as well as offer healthy food and beverages.

– continued

East Bay Regional Park District in Oakland, California, partnered with Kaiser Permanente and the Regional Parks Foundation to create a free Trails Challenge program. This self-paced program is designed to get people fit and into the outdoors while it challenges participants to travel 26.2 miles of trails. With registration, the public receives web access to download the 2010 guidebook. A commemorative pin is sent once a participant has completed the challenge and turned in a logbook.

Finally, the city of Bakersfield, California, partnered with Aera Energy, LLC, to fund and develop a youth baseball complex that integrated physical activity options (fitness equipment and play area) for children who attended baseball games but were not in the baseball league, and for adults supervising these children. Adult outdoor fitness equipment was placed adjacent to the children's playground. The combination of the ballpark and play area is next to (and within easy access to) a 32-mile paved multiuse path, which is the most popular facility in the city.

“Parks and recreation can build upon existing health collaborations by embracing a wider range of partners (such as physicians, transportation and planning agencies, private insurance companies) to create greater awareness and use of parks and recreation for physical activity.”

More Partnership Approaches to Address Physical Activity

Existing evidence suggests that programming (special events, health fairs and screenings, programs with physical activity) is the dominant partnership strategy used to promote physical activity. More collaborative approaches are desirable. A recent survey of health partnerships in parks and recreation found that these collaborations helped agencies to meet their mission and improve their image and visibility in the community but were less likely to result in improvements to physical features in their community, enhanced connections to funding sources, and policy changes. Future health partnerships could focus on creating more active park features, on creating activity-friendly policies, and identifying funding sources to resource these efforts.

“Current health partnership efforts to promote increased physical activity could be expanded beyond programmatic efforts to include environmental and policy changes.”

Example 7: Seed Funding Can Help to Initiate Community-based Physical Activity Partnerships and Social Marketing Campaigns

Current evidence suggests that larger park and recreation agencies (in terms of populations served and operational budgets) are more likely to be actively engaged in health partnerships. However, a number of smaller organizations and communities have expressed interest in initiating or signing onto communitywide efforts to promote physical activity. These organizations indicate that seed monies or resources would be a helpful catalyst for them to begin physical activity partnerships. For example, one concern raised by agencies not currently engaging health partnership participants was the difficulty in finding and acquiring the resources needed to initiate and launch health partnerships.

Local, state, and national organizations could work cooperatively to establish seed funding designed to encourage the establishment of physical activity partnership programs and initiatives in targeted communities. In fact, some states are already providing these resources on a competitive basis and this effort may jump-start nonexistent or fledgling partnerships. For example, the Pennsylvania Department of Conservation and Natural Resources worked through a statewide coalition, Pennsylvania Advocates for Nutrition and Activity, to offer small seed grants to communities to participate in Keystone Active Zone, a program to promote parks as low-cost, accessible opportunities for physical activity.

Develop New Policy and Funding Alternatives to Expand the Physical Activity Impact of Parks and Recreation

The policy arena has been one of the most understudied elements of the physical activity movement. Policies are the structures, rules, and playbooks by which we can implement all of the previous recommendations. “Policies” have been defined as plans or deliberate acts of government to alter or influence society. These acts can include taxation, regulation, expenditures, and legal requirements or prohibitions. The Physical Activity Policy Research Network (PAPRN) has defined physical activity policy as a legislative action, organized guidance, or rule that may affect the physical activity environment or the behavior of people. Policies can be in the form of written codes or standards that guide choices or common practices (Schmid, Pratt, and Widmer, 2006).

There are several opportunities to expand the role of park and recreation policy in shaping physical activity at the international, national, state, and local levels. A number of place, programmatic, promotional, participant, and public funding policies could be considered as ways to increase our field’s ability to address today’s sedentary culture. These include:

- policies or guidelines for ensuring either that there are park and recreation facilities within a certain distance to population centers or that there is an adequate supply of these facilities within a jurisdiction. For example, several U.S. cities are adopting place/proximity policies from the Healthy Development Measurement Tool (www.thehdmt.org). This tool sets proximity and funding benchmarks for development projects that can enhance park access. (For example, Is the project within one-fourth mile access of a neighborhood or other regional park? Does the project contribute funding (via impact fees) toward existing or new parks and park maintenance?)
- policies that establish hours of operation to ensure use across a broad spectrum of the population, such as opening schoolyards for public use during after-school hours.
- program policies that incorporate recommended levels or bouts of physical activity provided through park and recreation services. For example, the Healthy Parks Initiative of the Los Angeles Department of Parks and Recreation has a policy of incorporating 20 minutes of moderate-to-vigorous physical activity into each program offered.

- policies that establish pedestrian and bicycle networks between parks and where people work, live, shop, and worship. For example, Washington state has developed sample comprehensive planning policies to support physically active communities. Park and recreation facilities play a prominent role in these plan policies. The city of Vancouver, Washington's, public facilities and services policy recommends providing "a system of trails linking public and private open spaces, parks, recreational uses and transportation facilities within and between jurisdictions." This policy encourages the use of green spaces and corridors as pedestrian and non-auto linkages within the urban area. (Public Facilities and Services Policy 31 - City of Vancouver Comprehensive Plan, 2004)
- funding policies to support the capacity of parks and recreation in fulfilling its physical activity goals. For example, while support for federal and state appropriations should continue to be a policy priority, there is also a need to identify new sources of funding from other service providers (insurance companies, public health) and from employer organizations (rather than just user fees from individuals).
- promotional and communication policies that ensure that a physical activity message is integrated into agency marketing materials and public relations efforts
- policies that encourage health partnerships to establish formal memoranda of understanding across a wide range of partners, use multiple approaches to increase physical activity, and mandate an evaluation of partnership outcomes
- training, continuing education, and university curriculum policies that incorporate an understanding of physical activity benefits and approaches into lessons, case studies, and exercises

“The potential of park and recreation policy in promoting physical activity levels is significant, and a number of policy interventions could be considered to increase more active use of park and recreation services.”

Evaluate Park and Recreation Services' Contributions to Physical Activity

A final recommendation is to conduct systematic evaluation of ongoing efforts. There is a need to further substantiate and extend the evidence base at local, state, and national levels using more advanced monitoring.

As park and recreation services struggle to sustain services and amenities for their constituents, it will be important for them to gauge the extent to which their services provide physical activity and health outcomes as well as the cost-efficiencies of these services as a form of preventive health. There is also a need to understand the amount of physical activity that occurs across a variety of different park and recreation contexts and how program, people, promotion, and place initiatives influence these physical activity levels. Fortunately, new tools are being created to audit or assess park and recreation environments and to document park-based physical activity levels (e.g., System for Observing Play and Recreation in Communities; Bedimo-Rung Assessment Tool—Direction Observation). These and other tools are available through Active Living Research at www.activelivingresearch.org/resourcesearch/toolsandmeasures.

More effort should also be devoted to inventorying or collecting basic data on existing park and recreation facilities, services, and policies nationwide. A new surveillance system or module incorporated into existing tracking mechanisms could provide a structure to collect this information and convey key findings to community planners, policymakers, park advocates, and researchers. Long-term evaluations are needed

to assess the impact of budget reductions and funding decisions on the availability of recreation and park services and the extent to which this availability corresponds with increased or decreased physical activity levels.

“More effort should also be devoted to inventorying or collecting basic data on existing park and recreation facilities, services, and policies nationwide as well as studying how Americans use their local park and recreation services, including physical activity levels at these park and recreation settings.”

In summary, public park and recreation agencies have been shown, through an emerging body of scientific research, to play an important role in providing for physical activity for a broad cross section of the American public. It appears that the amount of financial investment and the quality of the facilities and programs are directly related to the amount of physical activity and the health benefits obtained from such activity. The potential exists for parks and recreation to play an even larger role in increasing the physical activity of the American public, and at modest cost.

References

- AARP. (2007). *The numerous benefits of walking*, www.aarp.org/health/fitness/info-2007/walking_numerous_benefits.html (accessed May 24, 2010).
- Active Living Research. (2010). *Parks, Playgrounds, and Active Living*, www.activelivingresearch.org/files/Synthesis_Mowen_Feb2010.pdf (accessed June 30, 2010).
- Agency for Healthcare Research and Quality.– (2007). Primary care doctors account for nearly half of physician visits but less than one-third of expenses. Retrieved June 30, 2010, from <http://www.ahrq.gov/news/nr/nr042507.htm>.
- American Society of Civil Engineers. (2009). *Report card for America's infrastructure—public parks and recreation—2009 grade C-*. Retrieved May 24, 2010, from <http://www.infrastructurereportcard.org/fact-sheet/public-facilities-public-parks-and-recreation>.
- Arria, S. (2010). How Much Does a Personal Trainer Cost? Cost Helper. Retrieved June 30, 2010, from www.costhelper.com/cost/fitness/personal-trainer.html.
- Bedimo-Rung, A., Mowen, A., and Cohen, D. The significance of parks to physical activity and public health: A conceptual model. *American Journal of Preventive Medicine*, 28(2), 159–168.
- Cawley, J., Meyerhoefer, C., and Newhouse, D. (2007). The correlation of youth physical activity with state policies. *Contemporary Economic Policy*, 25(4), 506–17.
- Cicchetti, C., Seneca, J., and Davidson, P. (1969). *The demand and supply of outdoor recreation*. New Brunswick, NJ: Rutgers Bureau of Economic Research.
- Chow, H. (2007). *Physically active leisure among older adults: Measurement, comparison and impact*. Germany: VDM Verlag Publishers.
- Cohen, D., Ashwood, J., Scott, M., Overton, A., Evenson, K., Staten, L., Porter, D., McKenzie, T., and Catellier, D. (2006). Public parks and physical activity among adolescent girls. *Pediatrics*, 118(5): 1381–89.
- Cohen, D., McKenzie, T., Sehgal, A., Williamson, S., Golinelli, D., and Lurie, N. (2007). Contribution of public parks to physical activity. *American Journal of Public Health*, 97(3), 514–23.
- Crompton, J.L., and Kaczynski, A.T. (2003a). Trends in local park and recreation department finance and staffing from 1964/65 to 1999/2000. *Journal of Park and Recreation Administration*, 21(4), 124–144.
- Crompton, J.L., and Kaczynski, A.T. (2004b). Trends in state governments' expenditures on parks and recreation, 1989/90 through 1999/2000. *Journal of Park and Recreation Administration*. 21(2), 101-116.
- Diez-Roux, A., Evenson, K., McGinn, A., Brown, D., Moore, L., Brines, S., and Jacobs, D. (2007). Availability of recreational resources and public activity in adults. *American Journal of Public Health*, 97(3), 493–99.
- Ecclestone, N.A., Myers, A.M., and Paterson, D.H. Tracking older participants of twelve physical activity classes over a three-year period. *Journal of Aging and Physical Activity*, 6(1) (1998), 70–82.
- Epstein, L., and Roemmich, J. (2001). Reducing sedentary behavior: Role in modifying physical activity. *Exercise & Sport Sciences Review*, 29(3), 103–108.
- Estabrooks, P., Lee, R., and Gyurcsik, N. (2003). Resources for physical activity participation: Does availability and accessibility differ by neighborhood socioeconomic status? *Annals of Behavioral Medicine*, 28(2), 100–104.
- Floyd, M., Spengler, J., Maddock, J., Gobster, P., and Suau, L. (2008). Environmental and social correlates of physical activity in neighborhood parks: An observational study in Tampa and Chicago. *Leisure Sciences*, 30(4), 360375.
- Frank, L., Kerr, J., Chapman, J., and Sallis, J. (2007). Urban form relationships with walk trip frequency and distance among youth. *American Journal of Health Promotion*, 21(4), S1–S7.
- Gallup Organization. (2009). Play matters: A study of best practices to inform local policy and process in support of children's play. Retrieved May 31, 2010, from <http://kaboom.org/GettingStarted/WhyPlayMatters/StudiesandStatistics/2003GallupStudyResults>.
- Garcia, R., Flores, E., and Pine, E. (2002). *Dreams of fields: Soccer, community, and equal justice*. Retrieved May 24, 2010, from www.cityprojectca.org/pdf/dreamsoffields.pdf.
- Giles-Corti, B., and Donovan, R. (2003). Relative influences of individual, social environmental, and physical environmental correlates of walking. *American Journal of Public Health*, 93(9), 1583–89.

- Gobster, P. (2001). Neighborhood-open space relationships in metropolitan planning: A look across four scales of concern. *Local Environment*, 6(2), 199–212.
- Gobster, P. (2002). Managing urban parks for a racially and ethnically diverse clientele. *Leisure Sciences*, 24(2), 143–59.
- Godbey, G. (1985). Non-use of public leisure services: A model. *Journal of Park and Recreation Administration*, 3, 1–12.
- Godbey, G. (2009, May). *Outdoor recreation, health, and wellness: Understanding and enhancing the relationship*. Resources for the Future. Retrieved May 31, 2010, from www.rff.org/Publications/Pages/PublicationDetails.aspx?PublicationID=20803.
- Godbey, G., Caldwell, L., Floyd, M., and Payne, L. Contributions of Leisure Studies and Recreation and Park Management Research to the Active Living Agenda. *American Journal of Preventive Medicine*. February 2005.
- Godbey, G., Graefe, A., and James, S. (1992). *The benefits of local recreation and park services: A nationwide study of the perceptions of the American public*. Arlington, VA: National Recreation and Park Association.
- Godbey, G., Payne, L., and Orsega-Smith, B. (2004). *Examining the relationship of local government recreation and park services to the health of older adults*. Robert Wood Johnson Foundation Grant Research Results.
- Gordon-Larsen, P., McMurray, R., and Popkin, B. (2000). Determinants of adolescent physical activity and inactivity patterns. *Pediatrics*, 105(6), e83.
- Graefe, A.R., Mowen, A., and Covelli, E.A. (2009). *Perceived Benefits of Outdoor Recreation Activities*. Paper presented at the 15th International Symposium on Society and Resource Management, Vienna, Austria, July 5–8, 2009.
- GreenHour.org. *No Child Left Inside federal legislation and other public policy efforts*. Retrieved May 24, 2010, from <http://www.nwf.org/Get-Outside/Be-Out-There/Why-Be-Out-There/What-is-a-Green-Hour.aspx>.
- Henderson, K.A., and Ainsworth, B.E. (2002). Enjoyment: A link to physical activity, leisure, and health. *Journal of Park and Recreation Administration*, 20(4), 130–146.
- Kaczynski, A., and Crompton, J. (2004). Development of a multi-dimensional scale for implementing positioning in public park and recreation agencies. *Journal of Park and Recreation Administration*, 22(2), 1–26.
- Kaczynski, A., and Henderson, K. Environmental Correlates of Physical Activity: A Review of Evidence about Parks and Recreation. *Leisure Sciences*, 29(4): 315–354, 2007.
- Kaczynski, A., Potwarka, L., and Saelens, B. (2008). Association of park size, distance, and features with physical activity in neighborhood parks. *American Journal of Public Health*, 98(8), 1451–1456.
- Li, F., Fisher, J., Brownson, R., and Bosworth, M. (2005). Multilevel modeling of built environment characteristics related to neighborhood walking activity in older adults. *Journal of Epidemiology and Community Health*, 59, 558–64.
- Librett, J. (2008, November). Speech to Trust for Public Land meeting, Denver, CO.
- Mowen, A., and Confer, J. (2003). The relationship between perceptions, distance, and socio-demographic characteristics upon public use of an urban park “in-fill.” *Journal of Park and Recreation Administration*, 23(3), 58–74.
- Mowen, A., Orsega-Smith, E., Payne, L., Ainsworth, B., and Godbey, G. (2007). The role of park proximity and social support in shaping park visitation, physical activity, and perceived health among older adults. *Journal of Physical Activity and Health*, 4, 167–179.
- Mowen, A.J., Trauntvein, N.E., Graefe, A.R., and Ivy, M.I. (2009). Assessing physical activity in parks and its role in shaping park preferences: A survey of Pennsylvania State Park day users and overnight visitors. Leisure Research Symposium. National Recreation and Park Association Annual Congress, Salt Lake City, UT, October.
- Mowen, A., Payne, L., Orsega-Smith, B., and Godbey, G. (2009). Assessing the health partnership practices of park and recreation agencies: Findings and implications from a national survey. *Journal of Park and Recreation Administration*, 27(3), 116–131.
- National Association of State Park Directors. *America’s state parks*. Retrieved May 24, 2010, from www.naspd.org.
- Oldridge, N. (1982). Compliance and exercise in primary and secondary prevention of coronary heart disease: A review. *Preventive Medicine*, 11, 56–70.
- Payne, L., Orsega-Smith, B., Godbey, G., and M. Roy. (1998, October). Local parks and the health of older adults. *Parks and Recreation*, 33(10), 64–70.
- Payne, L., Orsega-Smith, B., Roy, M., and Godbey, G. (2005). Local park use and personal health among older adults: An

- exploratory study. *Journal of Park and Recreation Administration*, 23(2), 1–20.
- Raymore, L., and Scott, D. (1998). The characteristics and activities of older adult visitors to metropolitan park districts. *Journal of Park and Recreation Administration*, 16(4), 1–21.
- Roemmich, J.N., Epstein, L.H., Raja S., et al. (2006). Association of access to parks and recreational facilities with the physical activity of young children. *Preventive Medicine*, 43, 437–41.
- Roper ASW. (2004). *Outdoor recreation in America 2003: Recreation's benefits to society challenged by trends. Report prepared for The Recreation Roundtable*, Washington, DC.
- Rosenberger, R.S., Bergerson, T.R., and Kline, J.D. (2009). Macro-linkages between health and outdoor recreation: The role of parks and recreation providers. *Journal of Park and Recreation Administration*, 27(3), 8–20.
- Rosenberger, R., Sneh, Y., Phipps, T., and Gurvitch, R. (2005). A spatial analysis of linkages between healthcare expenditures, physical inactivity, obesity and recreation supply. *Journal of Leisure Research*, 37(2), 216–35.
- Rung, A., Mowen, A., Broyles, S., and Gustat, J. (2010, February). *The influence of park conditions and supporting features on park-based physical activity*. Presented at the Active Living Research Annual Conference, San Diego, CA.
- Sallis, J., cited by Louv, R. (2005). *Last child in the woods: Saving our children from nature-deficit disorder*. Chapel Hill, NC: Algonquin Books.
- Sallis, J., and Glanz, P. (2006). The role of built environments in physical activity, eating, and obesity in childhood. *The Future of Children*, 16(1), 89–10.
- Sallis, J., Prochaska, J., and Taylor, W. (2000). A review of correlate of physical activity of children and adolescents. *Medicine and Science in Sports and Exercise*, 32(5), 963–75.
- Schmid, T., Pratt, M., and Witmer, L. A framework for physical activity policy research. *Journal of Physical Activity and Health* 2006; 3, Suppl 1: s20–29.
- Scott, D. (1997). Exploring time patterns in people's use of a metropolitan park district. *Leisure Sciences*, 19, 159–74.
- Silkamaki, J., and Wernstedt, K. (2008). Turning brownfields into greenspaces: Examining incentives and barriers to revitalization. *Journal of Health Politics, Policy and Law*, 33(3), 559–593.
- Smith, T. (2007, January). *Trends in national spending priorities, 1973–2006*. General Social Survey, National Opinion Research Center. University of Chicago, IL.
- Spotts, D., and Stynes, D. (1984). Public awareness and knowledge of urban parks: A case study. *Journal of Park and Recreation Administration*, 2(4):1–12.
- The Trust for Public Land. (2009). *Center for city park excellence*. Retrieved May 24, 2010, from www.tpl.org/tier2_a.cfm?folder_id=3208.
- The Trust for Public Land. (2009). *No place to play*. Retrieved May 24, 2010, from www.tpl.org/tier3_cd.cfm?content_item_id=14565andfolder_id=266.
- Tinsley, H., Tinsley, C., and Croskeys, C. (2002). Park usage, social milieu, and psychosocial benefits of park use reported by older urban park users from four ethnic groups. *Leisure Sciences*, 24(2), 199–218.
- Trojani, M., Palmieri, L., Vanuzzo, D., et al. (2006). Occupational and leisure time physical activity: trend in the Italian population. *G Ital Cardiol*. 7(7), 487–497.
- U.S. Department of Health and Human Services. (2009, February 24). Health Care Costs To Top \$8,000 Per Person, Feb. 24, 2009. Retrieved May 24, 2010, from www.cbsnews.com/stories/2009/02/24/health/main4824163.shtml?source=RSSattr=Health_4824163.
- Wolch, J., Wilson, J., and Fehrenbach, J. (2005). Parks and park funding in Los Angeles: An equity-mapping analysis. *Journal of Urban Geography*, 26(1), 4–35.
- Yancey, A., Winfield, D., Larsen, J., Anderson, M., Jackson, P., Overton, J., Wilson, S., Rossum, A., and Kumanyika, S. (2009). "Live, learn and play": Building strategic alliances between professional sports and public health. *Preventive Medicine*, 49(4), 322–325.

The Benefits of Physical Activity Provided by Park and Recreation Services: The Scientific Evidence

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Dr. Geoffrey Godbey is the President of Next Consulting, a company concerned with re-positioning leisure and tourism services for the near future as well as Professor Emeritus in the Department of Recreation, Park and Tourism Management at Penn State University. The author of ten books and over 100 articles concerning leisure, work, time use, aging, recreation and parks, tourism, health and the future, he is the past President of the Academy of Leisure Sciences.

Previously a faculty member at the University of Waterloo in Ontario, Canada, Godbey has undertaken research for the American Association of Retired Persons, the US Forest Service, the National Recreation Foundation and the Robert Wood Johnson Foundation. He has been a consultant to the National Science Foundation, State Government of Sao Paulo, Brazil, U.S. Department of the Interior, as well as many advertising agencies and public and private recreation, park and tourism organizations. Godbey has testified before committees of the United States Senate and the President's Commission on Americans Outdoors. A frequent public speaker to diverse groups, he has given invited presentations in twenty-four countries.

He also advised and was the spokesperson for Hampton Inn's Year of 1,000 Weekends campaign as well as serving on Hilton Hotel's Leisure Time Advocacy Board. From 2002–2004, Godbey helped develop the LifeTrail, a series of stretching and strengthening stations for older adults, for Playworld Systems, Inc. Currently he is an advisor on the future of leisure for The Next Thousand Years Project, sponsored by the Foundation for the Future.

Recently, he has conducted research on the impact of ethnic change on outdoor recreation, relations between health and use of leisure, and the impact of changing demo-

graphics on the tourism function of the National Park Service.

A book he co-authored with Dr. John Robinson entitled *Time for Life—The Surprising Ways Americans Use Their Time* was published in June 1997 by Penn State Press with an updated edition published in 1999. Godbey is completed a five city study of the relationships between use of leisure and health among older adults. He is also currently at work on a book about the impact of time on consumer purchasing behavior with Paul Nunes and Jim Wilson. Several of his books have been translated into Chinese, Korean, and Spanish.

Godbey has written for or been extensively quoted by a wide variety of academic journals and popular periodicals including *American Demographics*, *Prevention*, *Modern Maturity*, *Issues in Science and Technology*, *Public Opinion*, *American Journal of Preventive Medicine*, *Social Research*, *The Futurist*, *Journal of Leisure Research*, *Leisure Sciences*, *Annals of Tourism Research*, *Journal of Travel Research*, *Leisure Studies*, *The World and I*, *American Enterprise*, *Hospitality Research Journal*, *Parks and Recreation*, *World Tennis*, and many others. His poetry has appeared in numerous outlets including *The Nation*.

Interviews and summaries of Godbey's writings have appeared in a number of mass media outlets including *US News* and *World Report*, *Newsweek*, *Time*, *Reader's Digest*, *The Economist*, *The Today Show*, *Good Morning America*, *CBS Morning Show*, *New York Times*, *Glamour*, *Psychology Today*, *Wall Street Journal*, *USA Today*, *Washington Post*, *Modern Maturity*, *The Chronicle of Higher Education*, *Cosmopolitan*, *Redbook*, *The Utne Reader*, *NBC Evening News* with Tom Brokaw, *CNN News*, *The ABC Evening News* with Peter Jennings and many others.

The Benefits of Physical Activity Provided by Park and Recreation Services: The Scientific Evidence

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Dr. Andrew Mowen is an Associate Professor in the Department of Recreation, Park and Tourism Management at The Pennsylvania State University. He has evaluated recreation, park and tourism policies and practices for over fifteen years. Dr. Mowen received his Ph.D. in Leisure Studies from Penn State. His doctoral dissertation examined citizen response to corporate partnerships at municipal park and recreation agencies. An article based on this research earned him the *2004 Journal of Park and Recreation Administration Best Paper Award* as judged by the American Academy of Park and Recreation Administrators.

Upon completion of his terminal degree, Dr. Mowen worked as the Research Manager for Cleveland Metroparks, a three-time National Gold Medal Award® winning agency. There, he conducted over twenty studies which evaluated the impact of park programs and policies on the leisure preferences and behaviors of Cleveland area residents. In 2001, he received a grant from the Cleveland Foundation to assess community changes as they related to park use, barriers to use, and citizen attitudes concerning park design. Dr. Mowen also helped to develop a trail and visitor monitoring system for Cleveland Metroparks, which provided recreation and trail counts covering the Park District's entire 20,000 acres and 100+ entrances. This system earned him the *1999 Vision Award of Excellence for Management Processes* and was highlighted at national and international recreation use monitoring conferences.

Since his appointment at Penn State in 2002, Dr. Mowen has focused on understanding the linkages between park settings, physical activity, and health. For example, He conducted a pilot recreation and health campaign evaluation for the Pennsylvania Advocates for Nutrition and Activity. This assessment examined the role of park use and neighborhood walkability upon physical activity and health of key citizen

groups. Dr. Mowen also conducted a National Recreation and Park Association (NRPA) study that examined nationwide health partnership practices within the park and recreation profession and served as a Co-Principal Investigator to the 2009-2013 Pennsylvania Outdoor Recreation Plan. Dr. Mowen currently conducts research that links park capacity (e.g., miles of trails, park acreage, park expenditures) with key population health indicators such as physical activity and obesity and is spearheading a research project to evaluate the impact of major park renovations on physical activity and health in Allentown, Pennsylvania. In addition to these health policy studies, Dr. Mowen co-authored a park, recreation, fitness, and sport white paper for the *United States National Physical Activity Plan*, a research synthesis on *Parks, Playgrounds and Active Living* for Active Living Research, and a monograph for NRPA on *The Benefits of Physical Activity Provided by Park and Recreation Services*.

Dr. Mowen has advised a wide variety of public and non-profit agencies including the Pennsylvania Department of Conservation and Natural Resources, Fairfax County Park Authority, the National Park Service, LSU School of Public Health, USDA Forest Service, Rails-To-Trails Conservancy, the Trust for Public Land, Active Living Research, Playworld Systems, Inc., and the Roanoke Rivers Partnership. His research and viewpoints are published in the *Journal of Park and Recreation Administration*, *Leisure Sciences*, *Journal of Leisure Research*, *Parks & Recreation*, *Journal of Physical Activity and Health*, *American Journal of Preventive Medicine*, *the President's Council on Physical Fitness and Sports Research Digest*, *Preventive Medicine* and the *Journal of Non-profit and Public Sector Marketing*. Andrew currently serves as an Associate Editor for the *Journal of Park and Recreation Administration*, and is a member of the *NRPA Research Advisory Committee* and the *Pennsylvania Parks and Forests Foundation*.



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Park and recreation services provide opportunities for physical activity during leisure, and recent research shows that leisure, not paid work or housework, is now the part of life where the most physical activity occurs. People move their bodies either because they have to or because they want to. The necessity of moving one's body in daily life has declined dramatically, helping produce an epidemic of obesity. The Benefits of Physical Activity: The Scientific Evidence. www.NRPA.org. In many of these studies, ethnic minorities constituted an important user group for physical activity. One study, for example, concluded that public parks are critical resources for physical activity in minority communities. [Geoffrey Godbey and Andrew Mowen, "The Benefits of Physical Activity Provided by Park and Recreation Services: The Scientific Evidence"]. In a five-city survey, 38 percent of people over 50-years-old said they used a park at least once a week. So these oases are more than just a pretty place. People on the other end of the age spectrum benefit too. And each additional \$10 per person that the government invests in parks and recreation was associated with a third-of-a-day more vigorous exercise by girls every week. Such state spending also drove more strength-building exercise for boys and girls. All of which should prevent some of the more than \$8,000 per year of health care costs per person. We confirm that there is irrefutable evidence of the effectiveness of regular physical activity in the primary and secondary prevention of several chronic diseases (e.g., cardiovascular disease, diabetes, cancer, hypertension, obesity, depression and osteoporosis) and premature death. We also reveal that the current Health Canada physical activity guidelines are sufficient to elicit health benefits, especially in previously sedentary people. There appears to be a linear relation between physical activity and health status, such that a further increase in physical activity and fitness will lead